-continued

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Leu Arg Gly Ala Arg Cys
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1-10. (canceled)

11. An in vitro method of producing a recombinant AAV virion in a mammalian host cell, wherein the mammalian host cell is a HEK 293T cell, and wherein the cell is suspended in a transfection media, comprising contacting the cell with polyethylenimine ("PEI") and:

(i) an accessory construct, wherein said accessory construct is a plasmid (pHelper) consisting essentially of adenoviral E2, E4Orf6, and VAI RNA genes operably linked to an origin of replication element and one or more other regulatory sequences;

(ii) an AAV helper construct, wherein said AAV helper construct is a plasmid (pTrans) consisting essentially of AAV2 rep and AAV1, AAV2, AAV5, AAV8, or AAV9 cap coding regions operably linked to one or more regulatory sequences; and

(iii) an AAV vector construct, wherein said AAV vector construct is a plasmid (pCis) consisting essentially of AAV2 inverted terminal repeats flanking a heterologous gene of interest operably linked to one or more regulatory sequences,

wherein the ratio of pHelper:pTrans:pCis is 1:5:(0.009-0.36) (weight:weight:weight), the PEI is Transfection Grade Linear Polyethylenimine Hydrochloride (MW 40,000), and the ratio of PEI:DNA is about 3:1.

12. The method of claim **11**, wherein the HEK 293T cell is suspended at a cell density of 2.1-3.0×10^6 cells/mL.

13. The method of claim **12**, wherein the HEK 293T cell is suspended at a cell density of 2.2-2.7×10^6 cells/mL.

14. The method of claim **13**, wherein the HEK 293T cell is suspended at a cell density of about 2.5×10^6 cells/mL.

15. The method of claim **11**, wherein the ratio of pHelper:pTrans:pCis is 1:5:(0.30-0.36) (weight:weight:weight).

16. The method of claim **15**, wherein the ratio of pHelper:pTrans:pCis is 1:5:0.31 (weight:weight:weight).

17. The method of claim **11**, wherein the total amount of plasmid does not exceed 1.5 mg/L of transfection media.

18. An in vitro method of producing a recombinant AAV virion in a mammalian host cell, wherein the mammalian host cell is a HEK 293T cell, and wherein the cell adheres to a solid substrate in a transfection media, comprising contacting the cell with calcium phosphate and:

(i) an accessory construct, wherein said accessory construct is a plasmid (pHelper) consisting essentially of adenoviral E2, E4Orf6, and VAI RNA genes operably linked to an origin of replication element and one or more other regulatory sequences;

(ii) an AAV helper construct, wherein said AAV helper construct is a plasmid (pTrans) consisting essentially of AAV2 rep and AAV1, AAV2, AAV5, AAV8, or AAV9 cap coding regions operably linked to one or more regulatory sequences; and

(iii) an AAV vector construct, wherein said AAV vector construct is a plasmid (pCis) consisting essentially of AAV2 inverted terminal repeats flanking a heterologous gene of interest operably linked to one or more regulatory sequences,

wherein the ratio of pHelper:pTrans:pCis is 1:5:(0.009-0.36) (weight:weight:weight).

19. The method of claim **18**, wherein the HEK 293T cell is seeded at a cell density of 2.1-3.0×10^6 cells/mL.

20. The method of claim **12**, wherein the HEK 293T cell is seeded at a cell density of 2.2-2.7×10^6 cells/mL.

21. The method of claim **13**, wherein the HEK 293T cell is seeded at a cell density of about 2.5×10^6 cells/mL.